

Abstract

A GPRS Support Node (GGSN) has a plurality of user plane (data session) processing units (GTP-U) for handling data sessions for Mobile Stations (MSs), a plurality of controlling units (GTP-C/s) for controlling the data sessions payloads, and a master data session control unit (GTP-C/m) dispatching data sessions requests to GTP-C/s. When a GTP-U goes down, the GTP-C/m detects the failure. If no spare GTP-U is available, the GTP-C/m removes internal connections related to the failed data sessions, and instructs all the GTP-C/s that controlled data sessions lost on the failed GTP-U to delete the PDP contexts of those sessions, and requests a Route update from the Routing Engine (RE). If a spare GTP-U is available, the GTP-C/m activates the spare GTP-U, and requests every GTP-C/s that controlled data sessions on the failed GTP-U to rebuild these sessions on the spare GTP-U unit. Following completion of the rebuild, it requests a Route update from the RE.